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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/533,628	ARAI, AKIHIRO	
	Examiner	Art Unit	
	Aneeta Yodichkas	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

8. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/16/09 has been entered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7 and 22 recites the limitation "wherein as measured in a first direction in which the first type of reflected rays are arranged, the light receiving area has a size that is equal to or greater than the diameter of the luminous flux of reflected rays" in one of the limitations. There is insufficient antecedent basis for this limitation in the claim. It is unclear how a light receiving area has a size greater than the diameter of the luminous flux where a diameter could be in any direction. Clarification is needed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 7, 11, 16, 17, 20, and 22-27** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,275,463 to *Nagata et al*.

As to **claim 7**, *Nagata* discloses an optical head for reading and/or writing data from/on a storage medium, the optical head comprising: a light source (2) (Fig. 4, column 5, line 18); an objective lens (5) for focusing light, which has been emitted from the light source (2), onto a track of the storage medium (7) (Fig. 4, column 5, lines 18-21); light receiving means (8) including at least one light receiving area for receiving a luminous flux of reflected rays, which have been reflected from the storage medium (7), thereby outputting a light quantity signal representing quantity of light received (Fig. 4, column 5, lines 32-37); and tracking error signal generating means for generating a tracking error signal based on the light quantity signal (Fig. 6 and 7, columns 6-7, lines 62-19), where it is shown in Fig. 6 that there is no tracking error and in Fig. 7 that there is a tracking error, wherein the luminous flux of reflected rays includes a first type of reflected rays where zero-order and first-order components of the light diffracted by the track are superposed one upon the other and a second type of reflected ray consisting essentially of the zero-order components (Fig. 6-8 column 6, lines 53-61), where the hatched areas (13a, 13b) includes the 0^{th} and 1^{st} order lights and the non-hatched areas include the 0^{th} order lights, and wherein the light receiving area receives both the first type of reflected rays and the second type of reflected rays (Fig. 6, column 6, lines 59-61), where areas (13a, 13b) receive 0^{th} and 1^{st} order reflected rays, and wherein as

measured in a first direction in which the first type of reflected rays are arranged, the light receiving area has a size that is equal to or greater than the diameter of the luminous flux of reflected rays (Fig. 6-8, column 6, lines 53-61), where the hatched areas have receive the 1st and 0th order lights, and wherein as measured in a second direction perpendicular to the first direction, the light receiving area is narrower than a width of the first type of reflected rays (Fig. 6, column 6, lines 59-65), where the light receiving area (13a, 13b) is narrower in the second direction, being vertical, than the first direction, being horizontal.

As to **claim 11**, *Nagata* discloses the optical head comprising light splitting means for splitting the luminous flux of reflected rays into the first and second types of reflected rays (Fig. 4, column 5, lines 22-25), where the half-mirror (4) splits the light.

As to **claim 16**, *Nagata* discloses an optical head for reading and/or writing data from/on a storage medium having at least two tracks with mutually different reflectances, the optical head comprising: a light source (2) (Fig. 4, column 5, line 18); an objective lens (5) for focusing light, which has been emitted from the light source (2), onto one of the tracks of the storage medium (7) (Fig. 4, column 5, lines 18-21); light receiving means including: a plurality of light receiving areas, which receive a first type of reflected rays where zero-order and first-order components of the light diffracted by the track are superposed one upon the other to generate a light quantity signal representing quantity of light of the first type of reflected rays (Fig. 12, column 10, lines 20-32), where the hatched areas receive the 0th and 1st order lights; and a non-light-receiving area, which is provided between the light receiving areas so as not to receive

a second type of reflected ray consisting essentially of the zero-order components (Fig. 12, column 10, lines 20-32), where the non-hatched areas receive only 0^{th} order lights; and tracking error signal generating means for generating a tracking error signal based on the light quantity signal (Fig. 12, column 10, lines 20-32), where based on the light received on the photodetector shown, the tracking error is determined, wherein as measured in a direction in which the first type of reflected rays are arranged, the non-light-receiving area is narrower than a shortest distance between the first type of reflected rays (Fig. 12, column 10, lines 20-32), where non-light-receiving area or the non-hatched area (108c', 108d') is narrower than the shortest distance between the hatched areas (108k', 108l') between hatched areas (108j) and (108k') and between hatched areas (108j) and (108l').

As to **claim 17**, *Nagata* discloses the optical head wherein the light receiving means further includes another light receiving area to generate a light quantity signal representing quantity of light of a portion of the second type of reflected ray, which is not sandwiched between the reflected rays of the first type (Fig. 12, column 10, lines 20-32), where the non-hatched areas only receive the 0^{th} order light and the hatched area receives the 0^{th} and 1^{st} order lights, and wherein the optical head further includes: position signal detecting means for generating a position signal based on the light quantity signal representing the portion of the second type of reflected ray, the position signal representing a position of the objective lens (5) in a direction perpendicular to the optical axis of light entering the objective lens (5) (Fig. 4, column 5, lines 10-14, Fig. 12, column 10, lines 20-32), where the photodetector shown is the position signal detecting

means; and offset correcting means for correcting an offset to be produced in the tracking error signal due to a shift of the objective lens (5) by reference to the position signal (Fig. 4, column 5, lines 10-14, 43-47), where the offset is the tracking error signal and it is corrected by actuator (6).

As to **claim 20**, *Nagata* discloses the optical head comprising light splitting means for splitting the luminous flux of reflected rays into the first and second types of reflected rays (Fig. 4, column 5, lines 22-25), where the half-mirror (4) splits the light.

As to **claim 22**, *Nagata* discloses a drive for making an optical head, control signal generating -means and driving means read and/or write data from/on a storage medium, the optical head comprising: a light source (2) (Fig. 4, column 5, line 18); an objective lens (5) for focusing light, which has been emitted from the light source (2), onto a track of the storage medium (7) (Fig. 4, column 5, lines 18-21); light receiving means (8) including at least one light receiving area for receiving a luminous flux of reflected rays, which have been reflected from the storage medium (7), thereby outputting a light quantity signal representing quantity of light received (Fig. 4, column 5, lines 32-37); tracking error signal generating means for generating a tracking error signal based on the light quantity signal (Fig. 6 and 7, columns 6-7, lines 62-19), where it is shown in Fig. 6 that there is no tracking error and in Fig. 7 that there is a tracking error, and shifting means for changing a position of the lens parallel to the track responsive to a drive signal (Fig. 4, column 5, lines 10-14), where the lens (5) is moved in both the X and Y directions in relation to the tracks, wherein the luminous flux of reflected rays includes a first type of reflected rays where zero-order and first-order

components of the light diffracted by the track are superposed one upon the other and a second type of reflected ray consisting essentially of the zero-order components (Fig. 6, column 6, lines 53-61), where the hatched areas receive the 0^{th} and 1^{st} order type rays and the non-hatched areas receive only the 0^{th} order rays, wherein the light receiving area receives both the first type of reflected rays and the second type of reflected rays (Fig. 6, column 6, lines 59-61), where areas (13a, 13b) receive 0^{th} and 1^{st} order reflected rays, and wherein as measured in a first direction in which the first type of reflected rays are arranged, the light receiving area has a size that is equal to or greater than the diameter of the luminous flux of reflected rays (Fig. 6-8, column 6, lines 53-61), where the hatched areas have receive the 1^{st} and 0^{th} order lights, and wherein as measured in a second direction perpendicular to the first direction, the light receiving area is narrower than a width of the first type of reflected rays (Fig. 6, column 6, lines 59-65), where the light receiving area (13a, 13b) is narrower in the second direction, being vertical, than the first direction, being horizontal, and wherein the control signal generating means generates a control signal for controlling the position of the lens (5) such that the light follows the track on the storage medium in response to the tracking error signal (Fig. 4, column 5, lines 10-14), where the actuator receives a control signal to move the lens (5) in the X and Y directions to follow a track based on the tracking error signal, and wherein the driving means generates the drive signal for driving the shifting means in response to the control signal (Fig. 4, column 5, lines 40-46), where the actuator receives the tracking error signal, which creates the driving means for moving the lens.

As to **claim 23**, *Nagata* discloses a drive for making an optical head, control signal generating means and driving means read and/or write data from/on a storage medium having at least two tracks with mutually different reflectances, the optical head comprising: a light source (2) (Fig. 4, column 5, line 18); an objective lens (5) for focusing light, which has been emitted from the light source (2), onto one of the tracks of the storage medium (7) (Fig. 4, column 5, lines 18-21); light receiving means including: a plurality of light receiving areas, which receive a first type of reflected rays where zero-order and first-order components of the light diffracted by the track are superposed one upon the other to generate a light quantity signal representing quantity of light of the first type of reflected rays (Fig. 12, column 10, lines 20-32), where the hatched areas receive the 0^{th} and 1^{st} order lights; and a non-light-receiving area, which is provided between the light receiving areas so as not to receive a second type of reflected ray consisting essentially of the zero-order components (Fig. 12, column 10, lines 20-32), where the non-hatched areas receive only 0^{th} order lights, where as measured in a direction in which the first type of reflected rays are arranged, the non-light-receiving area is narrower than a shortest distance between the first type of reflected rays (Fig. 12, column 10, lines 20-32), where non-light-receiving area or the non-hatched area (108c', 108d') is narrower than the shortest distance between the hatched areas (108k', 108l') between hatched areas (108j) and (108k') and between hatched areas (108j) and (108l'); tracking error signal generating means for generating a tracking error signal based on the light quantity signal (Fig. 12, column 10, lines 20-32), where based on the light received on the photodetector shown, the tracking error is

determined; and shifting means for changing a position of the lens (5) parallel to the tracks responsive to a drive signal (Fig. 4, column 5, lines 10-14), where the actuator moves lens (5) in both the X and Y directions in relation to the tracks, wherein the control signal generating means generates a control signal for controlling the position of the lens such that the light follows the tracks on the storage medium in response to the tracking error signal (Fig. 4, column 5, lines 10-14), where the actuator receives a control signal to move the lens (5) in the X and Y directions to follow a track based on the tracking error signal and wherein the driving means generates the drive signal for driving the shifting means in response to the control signal (Fig. 4, column 5, lines 40-46), where the actuator receives the tracking error signal, which creates the driving means for moving the lens.

As to **claims 24 and 25**, *Nagata* discloses the optical head, wherein the light receiving means includes non-light-receiving areas, which are provided at both sides of the light receiving areas in the second direction so as not to receive the first type of reflected rays and the second type of reflected ray (Fig. 6-8, column 6, lines 53-61), where the non-light-receiving areas are the non-hatched areas and the light receiving areas are the hatched areas, which receive 0^{th} and 1^{st} order lights.

As to **claims 26 and 27**, *Nagata* discloses the optical head, wherein the first direction is a direction perpendicular to the track, and the second direction is a direction parallel to the track (Fig. 4, column 5, lines 4-14), where Fig. 4 shows an optical head and the direction X is parallel to the track and direction Y is perpendicular to the track.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 8-10, 18, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,275,463 to *Nagata et al*. in view of U.S. Patent Pub. No. 2001/0033528 A1 to *Sano et al.*

As to **claim 8**, *Nagata* discloses the optical head wherein if the light source (2) radiates light with a wavelength λ, the objective lens (5) has a numerical aperture NA and the track has a period T (Fig. 4, column 5, lines 10-19).

Nagata is deficient in disclosing the optical head reads and/or writes data from/on a storage medium that satisfies the inequality: $0.44<(NA* T)-1$.

However, *Sano* discloses the optical head reads and/or writes data from/on a storage medium that satisfies the inequality: $0.44<(NA* T)-1$ (Paragraph 48).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have created an optical head wherein the light source radiates a wavelength of λ as taught by *Nagata* by including the optical head read or write from a storage medium satisfies an inequality as taught by *Sano*. The suggestion/motivation would have been in order to have created a tracking error signal generator (Sano, paragraph 52).

As to **claim 9**, *Nagata* discloses the optical head comprising: position signal detecting means for generating a position signal based on a light quantity signal representing a portion of the second type of reflected ray, which is not sandwiched between the reflected rays of the first type, the position signal representing a position of the objective lens (5) in a direction perpendicular to the optical axis of light entering the objective lens (Fig. 4, column 5, lines 10-14, Fig. 6-8, column 6, lines 53-61), where the photodetector shown is the position signal detecting means; and offset correcting means for correcting an offset to be produced in the tracking error signal due to a shift of the objective lens by reference to the position signal (Fig. 4, column 5, lines 10-14, 43-47), where the offset is the tracking error signal and it is corrected by actuator (6).

As to **claim 10**, *Nagata* discloses the optical head wherein if the light source (2) radiates light with a wavelength λ, the objective lens (5) has a numerical aperture NA and the track has a period T (Fig. 4, column 5, lines 10-19).

Nagata is deficient in disclosing the optical head reads and/or writes data from/on a storage medium that satisfies the inequality: $0.40<(NA*T)-1<I0.46$.

However, *Sano* discloses the optical head reads and/or writes data from/on a storage medium that satisfies the inequality: $0.40<(NA*T)-1<I0.46$ (Paragraph 48). In addition, the same motivation is used as the rejection for claim 8.

As to **claim 18**, *Nagata* discloses the optical head wherein if the light source (2) radiates light with a wavelength λ, the objective lens (5) has a numerical aperture NA and the track has a period T (Fig. 4, column 5, lines 10-19).

Nagata is deficient is disclosing the optical head reads and/or writes data from/on a storage medium that satisfies the inequality: 0.44<(NA*T)-1.

However, *Sano* discloses the optical head reads and/or writes data from/on a storage medium that satisfies the inequality: 0.44<(NA*T)-1 (Paragraph 48). In addition, the same motivation is used as the rejection for claim 8.

As to **claim 19**, *Nagata* discloses the optical head wherein as measured in a first direction in which the first type of reflected rays are arranged, each said light receiving area has a size that is equal to or greater than the diameter of the luminous flux of reflected rays (Fig. 6-8, column 6, lines 53-61), where the hatched areas have receive the 1^{st} and 0^{th} order lights, and wherein as measured in a second direction perpendicular to the first direction, the light receiving area is narrower than the first type of reflected rays (Fig. 6, column 6, lines 59-65), where the light receiving area (13a, 13b) is narrower in the second direction, being vertical, than the first direction, being horizontal.

5. **Claims 12 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,275,463 to *Nagata et al*. in view of U.S. Patent No. 5,740,138 to *Hoshino et al*.

As to **claim 12**, *Nagata* discloses the optical head comprising: the offset correcting means corrects the offset to be produced in the tracking error signal due to the variation in light intensity distribution by reference to the variation signal (Fig. 4, column 5, lines 10-14, 43-47, Fig. 6-8, column 6, lines 53-61), where the offset is the

tracking error signal and it is determined based on the light intensities on the photodetector shown.

Nagata is deficient in disclosing the optical head of the offset correcting means corrects the offset to be produced in the tracking error signal due to the variation in light intensity distribution by reference to the variation signal comprising: a holder for holding the light splitting means and the objective lens together; and variation detecting means for generating a variation signal, representing a variation in light intensity distribution of the luminous flux of reflected rays on a boundary between two or more tracks with mutually different reflectances, based on the light quantity signal.

However, *Hoshino* discloses the optical head of comprising: a holder for holding the light splitting means and the objective lens together (Fig. 13, column 9, lines 12-59); and variation detecting means for generating a variation signal, representing a variation in light intensity distribution of the luminous flux of reflected rays on a boundary between two or more tracks with mutually different reflectances, based on the light quantity signal (Fig. 13, column 9, lines 12-59), wherein the offset correcting means corrects the offset to be produced in the tracking error signal due to the variation in light intensity distribution by reference to the variation signal (Fig. 6, column 6, lines 62-68, column 7, lines 1-22).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have created an optical head with an offset correcting means as taught by *Nagata* by including a holder for holding the light splitting means and the objective lens together as taught by *Hoshino*. The suggestion/motivation would have

been in order to be able to more accurately detect focus errors (Hoshino, Fig. 13, column 9, lines 12-59).

As to **claim 21**, *Nagata* discloses the optical head comprising: the offset correcting means corrects the offset to be produced in the tracking error signal due to the variation in light intensity distribution by reference to the variation signal (Fig. 4, column 5, lines 10-14, 43-47), where the offset is the tracking error signal and it is corrected by actuator (6).

Nagata is deficient in disclosing the optical head of comprising: a holder for holding the light splitting means and the objective lens together; and variation detecting means for generating a variation signal, representing a variation in light intensity distribution of the luminous flux of reflected rays on a boundary between two or more tracks with mutually different reflectances, based on the light quantity signal.

However, *Hoshino* discloses the optical head of comprising: a holder for holding the light splitting means and the objective lens together (Fig. 13, column 9, lines 12-59); and variation detecting means for generating a variation signal, representing a variation in light intensity distribution of the luminous flux of reflected rays on a boundary between two or more tracks with mutually different reflectances, based on the light quantity signal (Fig. 13, column 9, lines 12-59). In addition, the same motivation is used as the rejection for claim 12.

6. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,275,463 to *Nagata et al.* in view of U.S. Patent No. 6,088,307 to *Fushimi et al.*

As to **claim 13**, *Nagata* is deficient in disclosing the optical head wherein the track of the storage medium has a wobble to store predetermined information thereon, and wherein the optical head further includes wobble signal detecting means for generating a wobble signal, representing the wobble, based on the light quantity signal by performing computation processing on the position signal and the tracking error signal with the position signal multiplied by a prescribed coefficient.

However, *Fushimi* discloses the optical head wherein the track of the storage medium has a wobble to store predetermined information thereon (Column 8, lines 22-44), and wherein the optical head further includes wobble signal detecting means for generating a wobble signal, representing the wobble, based on the light quantity signal by performing computation processing on the position signal and the tracking error signal with the position signal multiplied by a prescribed coefficient (Column 8, lines 22-44).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have created an optical head for reading and/or writing data from/on a storage medium as taught by *Nagata* by including a light source and wobble signal detection as taught by *Fushimi*. The suggestion/motivation would have been in order to obtain a wobble signal from a grove track (Fushimi, column 8, lines 22-4).

7. **Claims 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,275,463 to *Nagata et al*. in view of .S. Patent No. 5,740,138 to *Hoshino et al*. in further view of U.S. Patent No. 6,088,307 to *Fushimi et al.*

As to **claim 14**, *Nagata* and *Hoshino* are deficient in disclosing the optical head wherein the track of the storage medium has a wobble to store predetermined information thereon, and wherein the optical head further includes wobble signal detecting means for generating a wobble signal, representing the wobble, based on the light quantity signal by performing computation processing on the variation signal and the tracking error signal with the variation signal multiplied by a prescribed coefficient.

However, *Fushimi* discloses the optical head wherein the track of the storage medium has a wobble to store predetermined information thereon (Column 8, lines 22-44), and wherein the optical head further includes wobble signal detecting means for generating a wobble signal, representing the wobble, based on the light quantity signal by performing computation processing on the variation signal and the tracking error signal with the variation signal multiplied by a prescribed coefficient (Column 8, lines 22-44).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have created an optical head for reading and/or writing data from/on a storage medium as taught by *Nagata* and *Hoshino* by including a light source and wobble signal detection as taught by *Fushimi*. The suggestion/motivation would have been in order to obtain a wobble signal from a grove track (Fushimi, column 8, lines 22-4).

As to **claim 15**, *Nagata* and *Hoshino* are deficient in disclosing the optical head wherein the wobble signal detecting means sets the prescribed coefficient that reduces an offset variation of the wobble signal.

However, *Fushimi* discloses the optical head wherein the wobble signal detecting means sets the prescribed coefficient that reduces an offset variation of the wobble signal (Column 8, lines 22-44). In addition, the same motivation is used as the rejection for claim 14.

Response to Arguments

8. Applicant's arguments filed 4/16/09 have been fully considered but they are not persuasive.

First, Applicant argues with respect to claims 7 and 22, on page 10, lines 6-12, that *Nagata* fails to teach a light receiving area receiving both the first type of reflected rays and the second type of reflected rays.

Examiner disagrees as *Nagata* teaches a light receiving area receiving both the first type of reflected rays and the second type of reflected rays (Fig. 6, column 6, lines 59-61), where areas (13a, 13b) receive 0^{th} and 1^{st} order reflected rays.

Second, Applicant argues, with respect to claims 7 and 22, on page 10, lines 15-19, that *Nagata* fails to disclose, "as measured in a second direction perpendicular to the first direction, the light receiving area is narrower than a width of the first type of reflected rays"

Examiner disagrees as *Nagata* discloses, "as measured in a second direction perpendicular to the first direction, the light receiving area is narrower than a width of the first type of reflected rays" (Fig. 6, column 6, lines 59-65), where the light receiving area (13a, 13b) is narrower in the second direction, being vertical, than the first direction, being horizontal.

Third, Applicant argues, with respect on claims 16 and 23, on page 11, lines 1-8, that *Nagata* fails disclose, “as measured in a direction in which the first type of reflected rays are arranged, the non-light receiving area is narrower than a shortest distance between the first type of reflected rays".

Examiner disagrees as *Nagata* discloses, “as measured in a direction in which the first type of reflected rays are arranged, the non-light receiving area is narrower than a shortest distance between the first type of reflected rays" (Fig. 12, column 10, lines 20-32), where non-light-receiving area or the non-hatched area (108c’, 108d’) is narrower than the shortest distance between the hatched areas (108k’, 108l’) between hatched areas (108j) and (108k’) and between hatched areas (108j) and (108l’).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aneeta Yodichkas whose telephone number is (571) 272-9773. The examiner can normally be reached on Monday-Thursday 8-5, alternating Fridays, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Andrea Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Jorge L Ortiz-Criado/
Primary Examiner, Art Unit 2627

/A.Y./
6/22/09